

- ✓ Page 8, line 29, delete the words "liquid-crystal alignment".
- ✓ Page 20, lines 28, 29 and 30, delete the words "liquid-crystal alignment".
- ✓ Page 21, lines 4 to 5, delete the words "liquid-crystal alignment".
- ✓ Page 23, lines 5, 6, 7 and 14, delete the words "liquid-crystal alignment".

**IN THE CLAIMS:**

A version of the amended portions of the Claims with markings to show changes made is included at the end of this document.

Please amend the claims as follows:

B<sub>1</sub>

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1. A method of preparing a multi-domain liquid-crystal display, which is operable in the in-plane switching mode, comprising the steps of:  
depositing a dry deposit alignment layer on a substrate; and  
aligning said dry deposited layer using at least two methods selected from the group consisting of: mechanical mask, photo-resist, UV treatment, and ridge and fringe field.

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4. The method of claim 1, wherein said photo-resist method comprises:  
depositing on a transparent conductive layer on a substrate a material to form said dry deposited layers;  
partitioning said dry deposited layers into first domain areas and second domain areas of the dry deposited layers;  
bombarding said dry deposited layers with a first ion beam; thereafter  
covering said first domain areas of said dry deposited layers with a mask leaving said second domain areas open;  
bombarding said second domain areas with a second ion beam; and  
removing said mask.

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9. A multi-domain, wide viewing angle liquid-crystal display, comprising:

- a bottom substrate having a first surface;
- a first transparent conductive layer disposed over said first surface of said bottom substrate;
- a top substrate having a second surface;
- a color filter layer disposed over said second surface of said top substrate;
- a second transparent conductive layer disposed over said color filter;
- a first dry deposited layer over said first transparent conductive layer;
- a second dry deposited layer over said second transparent conductive layer; said second dry deposited layer being spaced adjacent to and facing said first dry deposited layer;
- a plurality of uniformly sized transparent or non-transparent spacers distributed within said space; and
- a liquid-crystal material disposed in the space therebetween;

B3 wherein each of said first dry deposited layer and said second dry deposited layer is divided into a plurality of pixels each having a boundary and at least two domains; wherein each of said multi-domain, dry deposited layers is obtained by a method selected from the group consisting of: mechanical mask, photo-resist, UV treatment, and ridge and fringe field methods,

wherein said dry deposited layers are exposed to a particle beam;

wherein said particle beam is directed at said dry deposited layers at an adjustable angle with respect to said dry deposited layers, and

wherein said liquid-crystal display is operable in the in-plane switching mode.

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10. The multi-domain, wide viewing angle liquid-crystal display of claim 9, wherein said domains of said first and said second dry deposited layers are obtained by mechanical mask method.

11. The multi-domain, wide viewing angle liquid-crystal display of claim 10, wherein said mechanical mask method comprises:

By

depositing on a substrate a material to form a transparent dry deposited layer;  
masking said dry deposited layer into first domain areas and second domain areas of the dry deposited layer with a mask; and  
selectively bombarding said dry deposited layer with an ion beam through said mask.

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B5

18. The multi-domain, wide viewing angle liquid-crystal display of claim 9, wherein said domains of said first and said second dry deposited layers are obtained by photo-resist method.

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22. The multi-domain, wide viewing angle liquid-crystal display of claim 9, wherein said domains of said first and said second dry deposited layers are obtained by said UV treatment method.

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26. The multi-domain, wide viewing angle liquid-crystal display of claim 9, wherein said domains of said first and said second dry deposited layers are obtained by said ridge and fringe field method.

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B8

29. An improved method of preparing a liquid-crystal display of the type having the steps of forming a first dry deposited layer, forming a second dry deposited layer, spacing the first dry deposited layer and the second dry deposited layer adjacent to and facing each other and filling a liquid-crystal material in the space therebetween, wherein the improvement comprises the steps of:

forming a first multi-domain dry deposited layer;

38 forming a second multi-domain dry deposited layer;  
spacing said first multi-domain dry deposited layer and said second multi-domain dry deposited layer adjacent to and facing each other; and  
filling a liquid-crystal material in the space therebetween;  
wherein each of said multi-domain, dry deposited layers is obtained by a method selected from the group consisting of: mechanical mask, photo-resist, UV treatment, and ridge and fringe field, and

wherein said liquid-crystal display is operable in the in-plane switching mode.

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30. An improved method of preparing an in-plane switching mode liquid-crystal display of the type having the steps of forming a first polyamide alignment layer and a second polyamide alignment layer, wherein each of the first and second layers is rubbed with a mechanical roll wrapped in a velvet cloth, wherein the improvement comprises the steps of:

39 forming a first dry deposited alignment layer;  
forming a second dry deposited layer;  
spacing said first dry deposited layer and said second dry deposited layer adjacent to and facing each other; and  
filling a liquid-crystal material in the space therebetween;  
wherein each of said dry deposited layers is obtained by a method selected from the group consisting of: mechanical mask, photo-resist, UV treatment, and ridge and fringe field;

wherein said dry deposited layer is exposed to a particle beam;

wherein said particle beam is directed at said dry deposited layer at an adjustable angle with respect to said dry deposited liquid-crystal alignment layer, and

wherein said liquid-crystal display is operable in the in-plane switching mode.

31. A wide viewing angle in-plane switching mode liquid-crystal display, comprising:

a bottom polarizer;

a bottom substrate;

a top polarizer;

a top substrate;

a color filter layer disposed over a surface of said top substrate;

a plurality of common electrodes disposed in the bottom substrate plane and a plurality of pixel electrodes disposed in a staggering relationship therewith to form a comb-like structure for producing an electric field parallel to plane of said bottom substrate so that when operated, the molecules of said liquid-crystal material are switched to rotate by said vertical electric field in a direction parallel to the substrate surface;

a first dry deposited layer over said bottom substrate and said comb-like electrodes;

a second dry deposited layer over said color filter layer; said second dry deposited layer being spaced adjacent to and facing said first dry deposited layer;

a plurality of uniformly sized transparent or non-transparent spacers distributed within said space; and

a liquid-crystal material disposed in the space therebetween;

wherein said dry deposited layer is exposed to a particle beam;

wherein said particle beam is directed at said dry deposited layer at an adjustable angle with respect to said dry deposited layer,

wherein said dry deposited layers are aligned by a method selected from the group consisting of: mechanical mask, photo-resist, UV treatment, and ridge and fringe field, and

wherein said liquid-crystal display is operable in the in-plane switching mode.